

SELECTIVE SYNTHESIS OF SEMICONDUCTING CARBON NANOTUBES

Abstract of the Disclosure

Methods for selecting semiconducting carbon nanotubes from a random collection of conducting and semiconducting carbon nanotubes synthesized on multiple synthesis sites carried by a substrate and structures formed thereby. After an initial growth stage, synthesis sites bearing conducting carbon nanotubes are altered to
5 discontinue synthesis at these specific synthesis sites and, thereby, halt lengthening of the conducting carbon nanotubes. Synthesis sites bearing semiconducting carbon nanotubes are unaffected by the alteration so that semiconducting carbon nanotubes may be lengthened to a greater length than the conducting carbon nanotubes.